

### REMARKS

Reconsideration of this application is respectfully requested. Claims 13-18, 28, 33-46, 48-54 and 62-72 are pending in the application. Claims 13-18, 28, 33-40 and 63-72 are withdrawn from consideration. Claims 48-54 are allowed. Claims 41-46, and 62 are rejected. Claims 41, 46 and 62 have been amended to better clarify what Applicants regard as the invention. New claims numbered 73-75 have been added for consideration. No new matter has been added by way of this amendment. Thus, as a result of the foregoing amendment, claims 41-46, 48-54, 62 and 73-75 remain under examination. Accordingly, entry of the above amendments is believed to be in order and is requested.

Applicants' representatives would like to express their sincere appreciation for the telephonic discussion held with Examiner Mary Mosher on January 29, 2004 as related to the claims under consideration. As noted in that conversation, Applicants confirmed their belief that the 35 USC 102(e) and 102(a) rejection in the current office action was cited in error as related to claim number 62, which was previously amended to remove subject matter cited in the reference by Briles et al. in the previous office action. Furthermore, it was brought to the Examiner's attention that the Examiner had noted in the current Office Action under "Rejections withdrawn" that the rejection of claim 62, under 35 USC 102(e) and (a) was mooted in light of the Applicants' previous claim amendment. The Examiner has kindly agreed to look into this matter. Applicants also discussed with the Examiner the rejections of claims 46 and 62 under 35 USC 112, first and second paragraphs, and possible claim amendments supported by the specification to help place these claims in condition for allowance. Accordingly, and on this basis, Examiner Mosher has kindly agreed to review these further claim amendments.

Claim 46 was rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Furthermore, claim 62 was rejected under 35 U.S.C. 112, first paragraph, for lack of enablement. The claims have been amended to better clarify what Applicants regard as the invention. Support for the amendments can be found on page 32, lines 11-13. Thus, withdrawal of the rejections under 35 U.S.C. §112 is respectfully requested.

Claims 41-45 and 62 are rejected under 35 U.S.C. §102(e) and (a) as being anticipated by Briles et al. (U.S. Patent No. 6,500,613) and (WO97/09994). Applicants

had previously provided arguments and further evidence and support for a right of priority to Applicants own provisional application, filed on May 1, 1996, (as related to SEQ ID NO: 20), thus obviating the Examiner's rejection under 35 U.S.C. 102(e) and 102(a) of the Briles et al. reference (U.S. Patent No. 6,500,613), which was filed on September 16, 1996. Furthermore, Applicants had previously amended claim 62 to delete reference to SEQ ID NO: 20, thus obviating the Examiner's rejection. Furthermore, the Examiner states in the current Office Action under "Rejections withdrawn" that the previous claim amendments rendered the rejections of claim 62 moot and had withdrawn the rejections under 35 USC 102(e) or (a) over Briles. Claim 62 has been further amended as suggested by the Examiner to better clarify what Applicants believe to be the invention. Support for the enablement of the claim, as currently amended, can be found in the specification on page 32, lines 11-19, page 76, lines 11-28 and in Example 1, page 66, lines 29-31 continuing to page 67, lines 1-6. Further support for enablement of amended claim 62 can be found in Example 5, whereby the methods for the isolation of CBPs are described on page 74, lines 24-28, continuing on to page 75, lines 1-21, wherein the analytical and immunological methods are described for monitoring reactivity of antibodies to CBPs using standard Western blotting procedures. Further support for amended claim 62 can be found on page 12, lines 25-28, on page 35, lines 16-17, on page 38, line 28 through page 42, line 19, on page 46, line 15 through page 50, line 13. In addition, claim 41 has currently been amended to delete reference to SEQ ID NO: 9, thus obviating the Examiner's rejection over Briles et al. Thus, withdrawal of these rejections is respectfully requested.

Support for new claims 73-75 can be found throughout the specification, and particularly on page 12, lines 25-28, on page 35, lines 16-17, on page 38, line 28 through page 42, line 19, on page 46, line 15 through page 50, line 13, on page 32, lines 11-19, on page 76, lines 11-28 and in Example 1, page 66, lines 29-31 continuing to page 67, lines 1-6, and on page 74, lines 24-28, continuing on to page 75, lines 1-21. For example, on page 32, lines 11-13, it states that the nucleotides from two DNA sequences must match by at least 75% over a defined length of the DNA molecule (preferably at least about 80%, and most preferably at least about 90 or 95%). In addition, new claims 73-75 recite "wherein said nucleic acid encodes a protein that is reactive with rabbit antisera

generated against an isolated protein consisting of the polypeptide of SEQ ID NO: 25”, the enabling disclosure for which may be found throughout the specification, but particularly on page 76, lines 11-28 and in Example 1 on page 66, lines 29-31 continuing on to page 67, lines 1-6. Further enabling support can be found in Example 5, whereby the methods for the isolation of CBPs are described on page 74, lines 24-28, continuing on to page 75, lines 1-21, wherein the analytical and immunological methods are described for monitoring reactivity of antibodies to CBPs using standard Western blotting procedures.

### ***Claim Rejections under 35 U.S.C. §112***

The Examiner has rejected Claim 46 under 35 U.S.C. §112, second paragraph as being indefinite.

In particular, the Examiner asserts that the claim recites “the nucleotide” which lacks antecedent basis in the claim as amended. The claim has been further amended to read on “oligonucleotide”, thus obviating the Examiner’s rejection.

In addition, the Examiner asserts that the claim recites “capable of hybridizing with the nucleic acid encoding an amino acid of...”, but does not specify hybridization conditions, since different oligonucleotides will hybridize under different conditions, thus affecting the scope of the claim. Applicants respectfully traverse the Examiner’s rejections and have amended the claim to read as the Examiner has suggested, thus deleting reference to “capable of hybridizing ...” and replacing it with “...wherein the oligonucleotide or its complement encodes at least 5 contiguous amino acids of SEQ ID NO: 1.” As the Examiner has noted, support for this amendment can be found in the specification on page 30, line 17. In light of the foregoing amendment to claim 46, Applicants respectfully request withdrawal of the rejection.

The Examiner has rejected claim 62 under 35 U.S.C. §112, first paragraph for lack of enablement. Applicants respectfully traverse the Examiner’s rejection, and have amended the claim to better clarify what Applicants regard as the invention and to provide functional language as the Examiner has suggested. Support for the claim amendment can be found in the specification on page 32, lines 11-13, wherein it states that the nucleotides from two DNA sequences must match by at least 75% over a defined length of the DNA molecule. In addition, claim 62 has been further amended to recite

“wherein said nucleic acid encodes a protein that is reactive with rabbit antisera generated against an isolated protein consisting of the polypeptide of SEQ ID NO: 25”, the support for enablement which may be found throughout the specification, but particularly on page 76, lines 11-28 and in Example 1 on page 66, lines 29-31 continuing on to page 67, lines 1-6. Further support for enablement can be found in Example 5, whereby the methods for the isolation of CBPs are described on page 74, lines 24-28, continuing on to page 75, lines 1-21, wherein the analytical and immunological methods are described for monitoring reactivity of antibodies to CBPs using standard Western blotting procedures. Further support for amended claim 62 can be found on page 12, lines 25-28, on page 35, lines 16-17, on page 38, line 28 through page 42, line 19, on page 46, line 15 through page 50, line 13. In addition, the relationship between the nucleic acid sequence of SEQ ID NO: 24 and the purified protein sequence of SEQ ID NO: 25 can be found on page 76, lines 19-23, wherein it is stated:

“Initial DNA sequence information for cbpA (SEQ ID NO: 24) was obtained from DNA fragments generated by anchored PCR. These fragments were generated using degenerate primers derived from the partial primary structure of internal fragments of the purified protein (SEQ ID NO: 25) purified by SDS polyacrylamide gel electrophoresis.”

In light of the foregoing amendment to claim 62, Applicants respectfully request withdrawal of the rejection.

#### ***Claim Rejections under 35 U.S.C. §102***

Claims 41-45 and 62 were rejected under 35 U.S.C. §102(e) as being anticipated by Briles et al (U.S. Patent No. 6,500,613). Furthermore, the Examiner has rejected claims 41-45 and 62 under 35 U.S.C. §102(a) as being anticipated by Briles et al. WO97/09994. The Examiner alleges that the Briles reference discloses a streptococcal binding protein which comprises SEQ ID NO: 9 in Figure 21, residues 374-385.

Applicants have amended claim 41 to delete reference to SEQ ID NO: 9, thus obviating the Examiner’s rejection. Withdrawal of the rejection of claim 41 and the dependent claims 42-45 is thus respectfully requested.

Furthermore, as noted above, Applicants believe that the rejection of claim 62 under 35 USC 102(e) and 102(a) in the current office action was cited in error since claim 62 was previously amended to remove subject matter cited in the reference by Briles et

al. in the previous office action. Furthermore, the Examiner has noted in the current Office Action under "Rejections withdrawn" that the rejection of claim 62, under 35 USC 102(e) and (a) was mooted in light of the Applicants' previous claim amendment. Accordingly, since Applicants believe that this was an inadvertent error, withdrawal of this rejection is respectfully requested.

***Fees***

A check in the amount of \$110 is enclosed to cover the petition for a one month extension of time. No other fees are believed to be necessitated by this amendment. However, should this be in error, authorization is hereby given to charge Deposit Account No. 11-1153 for any underpayment or to credit any overpayment.

***Conclusion***

Applicants believe that the foregoing amendments to the claims place the application in condition for allowance. Withdrawal of the rejections is respectfully requested. If a discussion with the undersigned will be of assistance in resolving any remaining issues, the Examiner is invited to telephone the undersigned at (201) 487-5800, ext. 118, to effect a resolution.

Respectfully submitted,



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